

### REMARKS

Claims 14 – 26 remain in this application. Claims 14 – 17 are withdrawn from consideration. Claim 18 has been amended. Reconsideration of this application in view of the amendments noted is respectfully requested.

Claim 18 has been amended to delete the limitation added in the previously filed amendment. Claim 18 has also been amended to add the limitation that the pre-amplifiers are located proximate the electrodes of the series in a circuit card. Also, claim 18 has been amended to add the limitation that the electrodes are attached to an electrode cover in such a way that an end of the electrodes extends into a channel and the opposite end is connected directly to a circuit card. Support for these limitations may be found in Figs. 3 and 4 of the drawings and from the specification on page 8, lines 2 – 4 and page 9, lines 15 – 17.

The specification has been amended to insert reference numeral 33, “protectively earthed cylinder 33,” which was previously inadvertently omitted.

Claims 18, 20, and 21 were rejected under Section 103(a) as being unpatentable over Glass et al. (U.S. Patent No. 5,120,421, hereinafter “Glass”) in view of Liu (U.S. Patent No. 4,655,880) and Cummings et al. (U.S. Patent No. 3,676,321, hereinafter “Cummings”). Applicant respectfully traverses this rejection. Neither Glass, Liu, or Cummings teach or suggest each electrode series including a pre-amplifier located proximate the electrodes of the series in a circuit card. These references also do not teach or suggest that the electrodes are attached to an electrode cover in such a way that an end of the electrodes extends into a channel and the opposite end is connected directly to the circuit card.

For these reasons, claim 18 is patentable over Glass, Liu, and Cummings, and any combination thereof. Claims 20 and 21, depending directly from claim 18, are therefore also patentable over Glass, Liu, and Cummings, and any combination of these references. Therefore, applicant respectfully requests that the Section 103(a) rejection of claims 18, 20, and 21 over Glass in view of Liu and Cummings be withdrawn.

Claims 18, 20, and 21 were rejected under Section 103(a) as being unpatentable over Winqvist et al. (Meas. Sci. Technol., 9, pp. 1937-1946, 1998, hereinafter "Winqvist") in view of Liu and Teske (U.S. Patent No. 5,503,720). Applicant respectfully traverses this rejection. Neither Winqvist, Liu, or Teske teach or suggest each electrode series including a pre-amplifier located proximate the electrodes of the series in a circuit card. These references also do not teach or suggest that the electrodes are attached to an electrode cover in such a way that an end of the electrodes extends into a channel and the opposite end is connected directly to the circuit card.

For these reasons, claim 18 is patentable over Winqvist, Liu, and Teske, and any combination thereof. Claims 20 and 21, depending directly from claim 18, are therefore also patentable over Winqvist, Liu, and Teske, and any combination of these references. Therefore, applicant respectfully requests that the Section 103(a) rejection of claims 18, 20, and 21 over Winqvist in view of Liu and Teske be withdrawn.

Claim 21 was rejected in the alternative under Section 103(a) as being unpatentable over either Glass, Liu, and Cummings, or Winqvist, Liu, and Teske as applied to claim 18 above, and further in view of Toxic Gas Citicels (hereinafter "Citicels"). Applicant respectfully traverses this rejection. Applicant incorporates by reference the arguments made above with respect to Glass, Liu, Cummings, Winqvist, and Teske above. Claim 21, depending directly from claim 18, is therefore allowable over Glass, Liu, and Cummings, or Winqvist, Liu, and Teske, and any further combination of these references with Citicels. Therefore, applicant respectfully requests that the Section 103(a) rejection of claim 21 over either Glass, Liu, and Cummings, or Winqvist, Liu, and Teske as applied to claim 18 above, in further view of Citicels be withdrawn.

Claim 24 was rejected under Section 103(a) as being unpatentable over either Glass, Liu, and Cummings, or Winqvist, Liu, and Teske as applied to claim 18 above, and further in view of Goerg et al. (U.S. Patent No. 3,616,272, hereinafter "Goerg"). Applicant respectfully traverses this rejection. Applicant incorporates by reference the arguments made above with respect to Glass, Liu, Cummings, Winqvist, and Teske above. Claim 24,

depending directly from claim 18, is allowable over any combination of either Glass, Liu, and Cummings, or Winqvist, Liu, and Teske, and any further combination of these references with Goerg. Therefore, applicant respectfully requests that the Section 103(a) rejection of claim 24 over either Glass, Liu, and Cummings, or Winqvist, Liu, and Teske as applied to claim 18 above, in further view of Goerg be withdrawn.

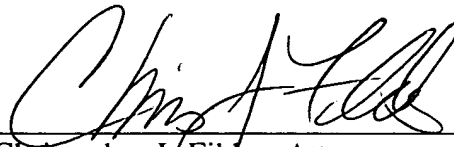
Claims 19, 22, 23, 25, and 26, depending from an allowable base claim, are also allowable.

This amendment and request for reconsideration is felt to be fully responsive to the comments and suggestions of the examiner and to place this application in condition for allowance. Favorable action is requested.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read "Chris J. Fildes", written over a horizontal line.

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